

Amendments to the Claims:

This listing of claims will replace all prior versions of claims in the application:

Listing of Claims:

1-17. (Cancelled)

18. (New) A method of designing an elevator system having a belt with a plurality of grooves on one side of the belt that travels over at least a drive sheave, comprising the steps of:

selecting a diameter of at least the drive sheave;

selecting a width of the grooves on the belt such that a ratio of the groove width to the sheave diameter is less than about .015,

wherein the ratio is dependent on an associated elevator cab speed of travel and the selected diameter and the selected width are selected to maintain the ratio (i) within a first range when the speed of travel is above a first speed or (ii) within a second, higher range when the speed of travel is a second, slower speed below the first speed; and

providing a fillet at an edge of each groove.

19. (New) The method of claim 18, including selecting the sheave diameter and groove width such that the ratio is less than about .008.

20. (New) The method of claim 18, including selecting the sheave diameter and groove width such that the ratio is between .001 and .015.

21. (New) The method of claim 18, wherein the speed of travel is approximately 1 m/s and including selecting the sheave diameter and the groove width such that the ratio is less than about .008.
22. (New) The method of claim 21, wherein the fillets each have a radius of curvature that is between about 0.1 mm and about 0.5 mm.
23. (New) An elevator system, comprising:
- a cab that moves at a contract speed;
 - a belt that supports the cab and facilitates movement of the cab, the belt having a plurality of spaced grooves on at least one side of the belt, each of the grooves including a fillet at an edge of each groove; and
 - at least one sheave over which the belt travels as the cab moves, the sheave having a diameter that has a relationship to a width of the grooves on the belt so that a ratio of the groove width to the sheave diameter is less than about .015,
- wherein the ratio of the groove width to the sheave diameter is selected dependent on the contract speed such that the ratio is (i) within a first range when the contract speed is above a first speed or (ii) within a second, higher range when the contract speed is a second, slower speed below the first speed.
24. (New) The system of claim 23, wherein the ratio is less than about .008.
25. (New) The system of claim 23, wherein the ratio is between .001 and .015.

26. (New) The system of claim 23, wherein the fillets each have a radius of curvature that is between about 0.1 mm and about 0.5 mm.